Message

From: Lindstrom, Andrew [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=04BF7CF26AA44CE29763FBC1C1B2338E-LINDSTROM, ANDREW]
Sent: 2/3/2016 2:08:09 PM
To: Xindi Hu Ex. 6 Personal Privacy (PP)
CC: Elsie M Sunderland [ems@seas.harvard.edu]; Laurel Schaider [schaider@silentspring.org]; rlohmann@uri.edu; Arlene Blum [arleneb@lmi.net]
Subject: RE: examples where zip codes of water plants do not correspond

Cindy,

Thanks for taking a look at this.

I guess I'm trying to point out that there are many specific sources that could impact a local water system and that unless we look at each case very carefully we're likely to miss the real story.

In Chapel Hill the source of contamination is the deposition WWTP biosolids in the headwaters of the town's drinking water reservoir (the brown dots on the Cane Creek Reservoir map). There are also airports, WWTP, AFFF training facilities within a 50 km radius of the drinking water plant, but teasing out which is most important is going to be hard work.

In Greensboro one source of contamination is a fire training area at Piedmont Triad International Airport. The reservoir (Lake Brant) is further downstream and the drinking water utility headquarters is in the downtown area. There are many different potential sources nearby including a large petroleum transport center that is in a different watershed. So while sources may be close to something (as the crow flies) they may also be very isolated by topography or hydrologic gradient. Is there any way to evaluate this with the model? Would it make sense to introduce "watershed" as a factor to be investigated?

Wilmington (zip code 28403 not 27403) is on the coast at the mouth of the Cape Fear River but the drinking water source is about 60 km inland upstream in zip code 28456. But the contamination in the River at this point is coming from much further upstream, most likely from the Chemours fluorochemical plant in Fayetteville - more than 100 km upstream from Wilmington.

These are just three of the local North Carolina examples that we have been working with. I'm guessing other local situations are similarly complex.

If the model is going to be useful for prioritizing sources and/or pinpointing areas of concern, I'm thinking that the paper should include some specific examples of where potential sources are likely to be a problem that should be investigated. Or discuss where the model is consistent with previously published data.

I'm happy to talk with anyone about this anytime. Today at 4 is good. I'm at 919-541-0551.

Thank you very much,

Andy

From: Xindi Hu [mailto Ex. 6 Personal Privacy (PP)
Sent: Tuesday, February 02, 2016 4:45 PM
To: Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>
Cc: Elsie M Sunderland <ems@seas.harvard.edu>; Laurel Schaider <schaider@silentspring.org>; rlohmann@uri.edu;

Arlene Blum <arleneb@lmi.net>
Subject: Re: examples where zip codes of water plants do not correspond

Hi Andy,
Thanks for the note.
In our current analysis, zip code of water plants (drinking water PFAS) and zip code of contamination (i.e., airports) do not necessarily need to be in the same zip code area. For example, airport will be counted as long as it is within a 50 km of the centroid of area that receives the water. The assumption is zip code of areas served by the water plant is the same as the zip code of water source (lake, reservoir). My rationale behind that assumption is based on accessibility to water source and convenience.

That being said, I see your point where these locations can be in very different zip code areas and potentially introduce errors into the statistic model. Extending the zip codes area to 3-digit is totally doable, actually 3-digit zip code area was used in the previous analysis when I presented through webinar.

However, before we jump in to do that, I noticed in the last slide of PDF, the water plant is in 27403 (or, 27408?), but it gets water from 28456. Even the first 2-digit zip code do not align. Please correct me if I'm not reading this properly.

And lastly, I'd love to have a phone call and hear more about your thoughts. How about tomorrow 4pm EST? Thanks again for your input.

Best,
Cindy
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On Feb 2, 2016, at 4:13 PM, Lindstrom, Andrew <Lindstrom.Andrew@epa.gov> wrote:

> Cindy, Elsie, Laural,
>
> Please take a look at the PDF I've attached showing three examples where zip codes of water plants do not correspond with the zip codes of the contamination here in NC.
>
> This is just my experience here in NC, but I think it may be common elsewhere.
>
> We need to think about this. Is there some way to extend the zip codes to include contiguous bordering zip code regions? Maybe 2 or 3 digit zip code would be better?
>
> The PDF is a little complicated so please give me a call if you want to talk about this.
>
> I'm at 919-541-0551 and I should be in my office all day Wednesday.
>
> Thank you very much,
>
> Andy
> <UCMR3 NC data Lindstrom.pdf>